

# ABO blood group system

Patient's [ABO](#) blood type has a profound impact on [coagulation](#) and [hemostasis](#).

Dubinski et al. from the Department of Neurosurgery, Institute for Transfusion Medicine and Immunohematology, Goethe University, [Frankfurt, Germany](#), conducted a study to evaluate the role of patient's blood type in terms of incidence, clinical course and outcome after [acute subdural hematoma](#) bleeding.

100 patients with acute subdural hematoma treated between 2010 and 2015 at the author's institution were included. Baseline characteristics and clinical findings including [Glasgow coma scale](#), [Glasgow outcome scale](#), hematoma volume, rebleeding, midline shift, postoperative seizures and the presence of anticoagulation were analyzed for their association with ABO blood type.

Patient's with blood type O were found to have a lower midline shift ( $p < 0.01$ ) and significantly less seizures (OR: 0.43;  $p < 0.05$ ) compared to non-O patients. Furthermore, patients with blood type A had the a significantly higher midline shift ( $p < 0.05$ ) and a significantly increased risk for postoperative seizures (OR: 4.01;  $p < 0.001$ ). There was no difference in ABO blood type distribution between acute subdural hematoma patients and the average population.

The ABO blood type has significant influence on acute subdural hematoma sequelae. Patient's with blood type O benefit in their clinical course after acute subdural hematoma whereas blood type A patients are at highest risk for increased midline shift and postoperative seizures. Further studies elucidating the biological mechanisms of blood type depended hemostaseology and its role in acute subdural hematoma are required for the development of an appropriate intervention <sup>1)</sup>.

<sup>1)</sup>

Dubinski D, Won SY, Behmanesh B, Brawanski N, Geisen C, Seifert V, Senft C, Konczalla J. The clinical relevance of ABO blood type in 100 patients with acute subdural hematoma. PLoS One. 2018 Oct 4;13(10):e0204331. doi: 10.1371/journal.pone.0204331. eCollection 2018. PubMed PMID: 30286106.

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