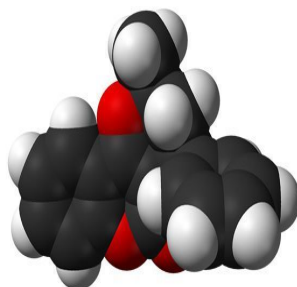


## Findings Enable Better Management of Anticoagulant-related Bleeding



According to a study published in JAMA, patients with oral anticoagulation-associated intracerebral haemorrhage, reversal of international normalised ratio (INR) below a certain level within 4 hours and systolic blood pressure less than 160 mm Hg at 4 hours were associated with lower rates of haematoma enlargement, and resumption of anticoagulant therapy was associated with a lower risk of ischemic events without increased bleeding complications.

The use of long-term oral anticoagulation (OAC) is on the rise. One of the most significant complications associated with OAC is intracerebral haemorrhage (ICH). There is also a lack of data about how to manage OAC-ICH.

The most pressing issues related to this are how to prevent haematoma enlargement and how to manage anticoagulation in the long term. There is a definite consensus that elevated INR levels need to be reversed in order to minimise haematoma enlargement. However, the mode of reversal, its time and the extent of INR reversal still remain unclear. There is also a lack of data on safety and clinical benefit of OAC resumption.

Hagen B. Huttner, MD, of the University of Erlangen-Nuremberg, Erlangen, Germany, and colleagues conducted a study to assess the association of anticoagulation reversal and blood pressure (BP) with haematoma enlargement and the effects of OAC resumption.

The study was conducted at 19 German tertiary care centres, and included 1176 individuals who were analysed for long-term functional outcome, 853 individuals who were analysed for haematoma enlargement and 719 individuals who were analysed for OAC resumption.

The findings showed that haemorrhage enlargement occurred in 36 percent of the patients. Reduced rates of haematoma enlargement were associated with reversal of INR levels < 1.3 within 4 hours of admission and with systolic BP <160 mm Hg as compared to INR of  $\geq 1.3$  and systolic BP of  $\geq 160$  mm Hg. INR reversal <1.3 within 4 hours and systolic BP of <160 mm Hg at 4 hours was also associated with lower rates of haematoma enlargement and in-hospital death.

OAC was resumed in 23.9 percent of the survivors and showed fewer ischemic complications and not significantly different hemorrhagic complications.

"The study represents the largest cohort of patients with OAC-ICH to date and reports 2 clinically valuable associations. First, rates of haematoma enlargement were decreased in patients with INR values reversed below 1.3 within 4 hours of admission and systolic blood pressures of less than 160 mm Hg at 4 hours. Second, rates of ischemic events were decreased among patients who restarted OAC without increased rates of bleeding complications. These retrospective findings require replication and assessment in prospective studies," the authors conclude.

Source: [JAMA](#)

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