

New method for safer dosing of anticoagulants

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Elderly people with atrial fibrillation are often treated with anticoagulants to thin the blood, but this medicine is hard to dose and patients have to have their blood tested regularly. Researchers at the Sahlgrenska Academy at the University of Gothenburg and Chalmers University of Technology have now devised a new method that improves the accuracy of risk assessments.

Atrial fibrillation, or [irregular heartbeat](#), is a very common heart rhythm disturbance that increases the risk of stroke and death. It is usually treated with warfarin, where the dose is calculated by measuring the coagulation of the blood. The dose is increased if coagulation is too quick, and decreased if it is too slow. Patients with unsatisfactory samples are tested more frequently, while satisfactory samples mean that the test interval can be extended.

New measurement method more reliable

In a study involving 20,000 patients in Sweden, Marcus Lind, postdoctoral researcher at the University of Gothenburg's Sahlgrenska Academy and consultant at the NU group of hospitals, tested a new [measurement method](#) that assesses far more reliably who is at risk of serious complications and admission to hospital.

"Our method takes account of how blood viscosity goes up and down," says Lind. "This meant that we could establish far more reliably which

patients were at risk of a stroke, haemorrhaging or dying."

Collaboration with Chalmers

The new method also takes account of the values' extremes. "In the past we've only checked whether patients fall within the therapeutic range but the new method allows us to identify more accurately how coagulation varies both within and beyond this range," says Anders Odén, professor of biostatistics at Chalmers University of Technology, who played a key role in developing the new method.

Reduces risks

The new method improves the chances of understanding which patients are at risk of complications, and is therefore an indicator for stepping up checks and probably reducing the risks.

"This is also important given the current debate about switching some patients who don't settle on warfarin to a different kind of medication," says Lind. "The new method pinpoints these patients more accurately."

Provided by University of Gothenburg

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