

PRESS RELEASE

Revacept protects during carotid artery surgery

Good news from vascular medicine: the innovative drug Revacept can protect people with narrowed carotid arteries from both further strokes and dangerous bleeding. Thanks to this completely new dual efficacy, Revacept is ideal for preventing complications after stroke prevention surgery on narrowed carotid arteries. This is the result of an international study conducted according to the highest quality standards, reported in the specialist journal *Stroke*. The study results once again confirm the safety and efficacy of Revacept, an active ingredient that was invented and is being further developed by the Martinsried-based start-up company advanceCOR. The study also provides evidence of a completely new mechanism of action that could usher in a new era of vascular medicine.

158 patients with narrowing of the carotid artery (carotid stenosis) took part in the clinical phase II study led by neurologist Professor Klaus Gröschel from the University Medical Centre Mainz. All patients required therapy because of dangerous narrowing of the carotid artery and received the nowadays standard basic therapy with the blood platelet inhibitors acetylsalicylic acid (Aspirin®) and/or clopidogrel to prevent renewed vascular occlusion (thrombosis). The vasoconstrictions were removed surgically or by inserting stents, or they were treated with the best possible medication. In addition, the volunteers were randomly divided into three groups and given a single infusion of either 40 or 120 milligrams of Revacept or a placebo. The day after the procedure, the patients were examined by magnetic resonance imaging for signs of small strokes triggered by the treatment and then followed up for one year.

As a result, the group that received 120 milligrams of Revacept had only about half as many small strokes as the placebo group. In the group that received 40 milligrams of Revacept, the comparative value with placebo decreased by only 10 percent. Serious complications such as new strokes occurred only half as often with the higher dose of Revacept as in the placebo group. Revacept proved to be particularly effective when stroke, bleeding and heart attack were considered together. Here, the novel active ingredient in the dosage of 120 milligrams caused a significant reduction of more than 54 percent compared to those treated with placebo.

Revacept acts like a plaster on damaged blood vessels (see box and infographic). The drug acts locally at the site of damage instead of systemically affecting the whole organism, as previous drugs do.

Study leader Klaus Gröschel emphasises the special potential of the new drug: "With a single Revacept infusion, brain infarctions can be avoided in patients with carotid stenosis. What is particularly interesting is the observation that this drug, with its completely new mechanism of action, can be given in addition to existing medications. This makes Revacept particularly suitable for the secondary prevention of strokes in patients with carotid stenosis, who have the highest risk of recurrent strokes among stroke patients and require intensive therapy."

Following the positive results of all previous studies with Revacept, including patients with coronary heart disease, his company is now seeking a collaboration with a larger pharmaceutical company, says Professor Götz Münch, cardiologist, founder and CEO of advanceCOR. "We are looking to talk to potential partners to jointly conduct a phase III trial with a larger patient group. Our hope is that patients will soon be able to benefit from this new active principle."

At the same time, basic research into the mechanism of action of Revacept will be intensified, says Götz Münch: "Revacept seems to protect patients from both strokes and bleeding, which is absolutely unique. In the prevention of bleeding complications, which jeopardise the success of the so important basic antithrombotic therapy, our drug could open up completely new avenues."

Links

Current study

Timo Uphaus, Toby Richards, Christian Weimar et al (2022): Revacept, an Inhibitor of Platelet Adhesion in Symptomatic Carotid Stenosis: A Multicentre Randomised Phase II Trial, Stroke.

<https://doi.org/10.1161/STROKEAHA.121.037006>

Previous studies with Revacept

Phase II study "ISAR Plaster" 2021 (coronary heart disease):

<https://jamanetwork.com/journals/jamacardiology/article-abstract/2777812>

Phase II study 2020 with stroke patients:

<https://clinicaltrials.gov/ct2/show/NCT01645306?term=Revacept&draw=2&rank=2>

About advanceCOR

advanceCOR GmbH is a biotechnology company in Martinsried near Munich founded in 2012. The clinical and preclinical projects of advanceCOR are developed in collaboration with university research groups.

www.advancecor.com

About Revacept

Revacept is a soluble biomolecule that fits like a plaster over damage to blood vessels. It is a fusion protein that is assembled in the laboratory from the biotechnologically produced glycoprotein GPVI and the human antibody immunoglobulin G. It is also a fusion protein. In cases of vascular damage, Revacept prevents dangerous blood clots from forming on the spot without affecting the body's general ability to stop bleeding. Revacept has been shown to be safe, well-tolerated and effective in several studies, including a trial in patients with coronary heart disease published in 2021.

How Revacept works

Healthy arteries (infographic: **1**) are lined with a smooth inner layer called the endothelium. Here the blood can flow freely – along with its red and white blood cells and the much smaller platelets that cover damage and stop bleeding. Blood vessel damage to the endothelium (**2**), typical of arteriosclerosis for example, exposes the underlying tissue with its collagen fibres. Rushing platelets attach themselves to this with the help of their own GPVI proteins: they cover the damage and attract more platelets. This often leads to an excessive reaction with thrombus formation, which can completely block the blood vessel and lead to a heart attack or stroke. This can be prevented with the fusion protein Revacept. It consists of two components: an artificially produced part of the platelet-typical GPVI protein and an antibody part. With its GPVI part, it can attach to the vascular damage and cover it just like blood platelets: Platelets swim past the damaged area, the blood flows unhindered through the artery (**3**).

How Revacept protects the arteries

