A new study conducted by researchers at Wake Forest Baptist Medical Center shows that aggressive lowering of blood pressure in hypertensive patients can reduce the risk of left ventricular hypertrophy (LVH). The study is published in the journal Circulation.

Elsayed Z. Soliman, MD, lead author of the study and director of the epidemiological cardiology research center at Wake Forest School of Medicine, explains that it is already known that high blood pressure can lead to LVH and that lowering this pressure can improve it. However, it was still not confirmed that intensive lowering beyond recommended levels could lead to more improvement in heart muscle.

The primary goal of this study was to determine if lowering blood pressure below the recommended levels could lead to more benefits to the heart muscle in terms of hypertrophy and whether it could prevent other cardiovascular events.

During the study, the researchers analysed 8164 patients from the National Institutes of Health's Systolic Blood Pressure Intervention (SPRINT) trial. All participants were randomised to the intensive blood pressure lowering group or the standard treatment group.

Findings showed that lowering systolic blood pressure to less than 120mmHg compared to the standard recommendation of 140 mmHg prevented the development of new LVH in those without it and also caused regression of LVH in those who already had it.

Dr. Soliman points out that the favourable impact on heart muscle did not explain the reduction in cardiovascular events associated with intensive blood pressure lowering. More research may be needed to understand what specific factors determine who gets the most benefits.

The findings however do provide evidence that intensive blood pressure lowering in patients with hypertension can be beneficial and that these benefits could go beyond reducing blood pressure and stress on the heart structure.

Source: Wake Forest Baptist Medical Center
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