

Global study shows telmisartan reduces outcome of cardiovascular death, heart attack or stroke

August 31 2008

An international study led by Canadian researchers has found that telmisartan, a medication used to lower blood pressure, reduced the outcome of cardiovascular death, heart attack or stroke in people who are unable to tolerate a widely available and effective standard treatment.

Dr. Salim Yusuf and Dr. Koon Teo, professors in the Michael G. DeGroot School of Medicine at McMaster University and clinicians at Hamilton Health Sciences, led the study. Today the research results will be published online by *The Lancet* and presented at this year's European Society of Cardiology Congress in Munich, Germany.

ACE inhibitors, or angiotensin-converting-enzyme inhibitors, are widely used and effective medications used to lower blood pressure. They work by helping to widen blood vessels to improve blood flow. Approximately 20 per cent of patients who could benefit from an ACE inhibitor stop taking it because of cough, kidney problems, swelling or symptomatic low blood pressure.

Telmisartan is a type of angiotensin-receptor blocker, or ARB. Like ACE inhibitors, telmisartan also lowers blood pressure, but works in a different manner. ARBs block the receptor sites in the body for angiotensin II, a naturally occurring hormone that constricts blood vessels and increases blood pressure.

The TRANSCEND (Telmisartan Randomized Assessment Study in ACE intolerant subjects with cardiovascular Disease) study enrolled nearly 6,000 people worldwide who are intolerant to ACE inhibitors, and evaluated whether telmisartan — compared to placebo — would reduce the risk of major cardiovascular events. A high proportion of patients received proven therapies, such as statins, anti-platelet agents and beta-blockers. Physicians were also free to use other medications that could lower blood pressure.

The researchers found that the outcome of cardiovascular death, heart attack or stroke was modestly reduced when patients took telmisartan. In addition, fewer patients receiving telmisartan were hospitalized for any cardiovascular reason compared to placebo. Telmisartan was also remarkably well tolerated, and fewer patients on telmisartan discontinued the medication compared to placebo.

Telmisartan reduced the outcome of cardiovascular death, heart attack, stroke or hospitalization for heart failure by a relative eight per cent (17 per cent in the placebo experienced those cardiac events compared to 15.8 per cent in the telmisartan group). This difference was not statistically significant.

However, when the outcome included cardiovascular death, heart attack or stroke (and not hospitalization for heart failure), telmisartan reduced that outcome by a significant 13 per cent (14.8 per cent in the placebo group experienced those cardiac events compared to 13 per cent with telmisartan).

"The TRANSCEND study demonstrates the value of telmisartan in people who are unable to tolerate angiotensin converting enzyme inhibitors," said principal investigator Dr. Yusuf, director of the Population Health Research Institute at McMaster University.

"Although the benefit is of moderate size, there is an impact on a range of outcomes including the composite of cardiovascular death, myocardial infarction and strokes, as well as cardiovascular hospitalizations. Given the large proportion of people who are unable to tolerate an ACE inhibitor, the use of telmisartan would be clinically important."

Source: McMaster University

Citation: Global study shows telmisartan reduces outcome of cardiovascular death, heart attack or stroke (2008, August 31) retrieved 22 November 2023 from <https://medicalxpress.com/news/2008-08-global-telmisartan-outcome-cardiovascular-death.html>

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