Drug that increases good cholesterol reduces clogging of arteries

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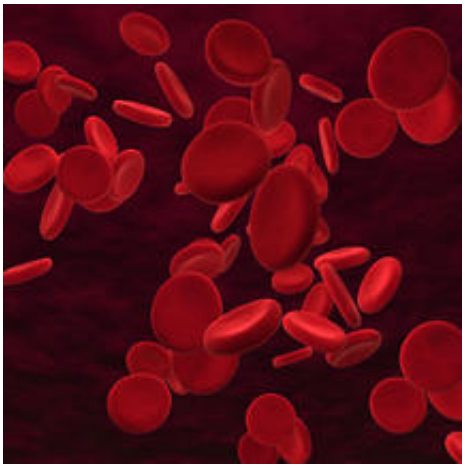

A drug that raises levels of ‘good’ cholesterol in the blood can reduce the 'furring up' of arteries.

(PhysOrg.com) -- A drug that raises levels of 'good' cholesterol, when taken in addition to standard statin therapy to lower 'bad' cholesterol, can reduce the furring up of arteries in patients with established heart disease, an Oxford University study has shown.

The findings are published in this week’s issue of the Journal of the American College of Cardiology.

‘This is the first clear evidence that a therapy to raise levels of good cholesterol when taken alongside statins can have a beneficial effect,’

says Dr Robin Choudhury of the Department of Cardiovascular Medicine at the University of Oxford, who led the study. 'Using MRI scans, we have shown a reduction in the size of artery walls in patients after a year of treatment with nicotinic acid.

'Our imaging study has identifying this as a very promising new prospect for treatment, and if the findings are borne out in ongoing larger studies this could benefit large numbers of people worldwide.'

Heart disease is still the biggest killer in the Western world, and atherosclerosis - the 'furring up' or hardening of arteries - is closely linked to later heart attacks and strokes.

The standard treatment for patients with atherosclerosis is to be prescribed statins. These drugs are effective in reducing the risk of heart attacks and stroke and work by lowering levels of 'bad' cholesterol, or low-density lipoprotein (LDL) cholesterol, which might otherwise get deposited in the arteries.

'Good' cholesterol, or high-density lipoprotein (HDL) cholesterol, is thought to help remove bad cholesterol from the arteries, and high levels of good cholesterol are associated with lower risk of heart disease. It has been thought that patients with low levels of good cholesterol might additionally benefit from treatments to raise these levels, but until now there has been little evidence to back this up.

Nicotinic acid, sometimes known as niacin, is one of the oldest drugs used for atherosclerosis and only fell out of favour as statins came to prominence. It is known to raise levels of good cholesterol in the blood.

Researchers at the Oxford Centre for Clinical Magnetic Resonance Research (OCMR) have been one of the leading groups to develop MRI methods for investigating vascular disease. So the Oxford team, along

with colleagues from the University of Manchester, set out to see whether a high dose of nicotinic acid in addition to statins would affect the progression of atherosclerosis, using MRI to measure any changes in the thickness of the walls of the carotid artery (which takes blood to the head and neck) in particular, as well as other arteries and measures of major blood vessel function.

71 patients, all with existing vascular disease, low levels of good cholesterol, and taking statins as prescribed by their GPs, were randomised to receive either 2 g of nicotinic acid or placebo for 1 year. MRI scans were performed before, after 6 months and after 12 months of the study.

After a year, the size of the carotid artery walls in patients who had received nicotinic acid was reduced compared with placebo. The area of the artery wall had got smaller by an average of 1.1 sq mm, while those receiving a placebo saw an average increase in the carotid artery wall of 1.2 sq mm.

Patients receiving nicotinic acid for 12 months showed an average 23% increase in levels of good cholesterol in the blood and a reduction in bad cholesterol of 19%.

'For years we had always been taught that atherosclerosis was a relentless progressive disease,' says Dr Choudhury. 'It is exciting to see a regression in established atherosclerosis.'

While this is evidence of a change that could be beneficial to patients, it is not a large-scale study of clinical outcomes to show whether taking nicotinic acid in addition to statins actually leads to fewer heart attacks, strokes or reduced mortality. But two such studies involving thousands of patients will report their results in the next few years (including one led by a different group at Oxford), which will give a clearer picture on

whether therapies to increase good cholesterol should be added to strategies to combat heart disease.

‘Our results are very encouraging in that they have shown a very definite potential benefit, and will certainly increase the great interest the large outcome studies that are due to report in the next couple of years,’ says Dr Choudhury.

Provided by Oxford University (news : web)