

Common antibiotic may help prevent heart attacks, Finnish study reports

Adds weight to theory that germs cause heart disease

BY BRAD EVENSON

Patients with heart disease may get help from an unexpected source: a common antibiotic.

A Finnish study found heart attack and angina patients who took clarithromycin had a 41% lower chance of suffering a heart attack or serious cardiac event.

The finding adds weight to the contentious theory that heart disease is caused by germs. It is reported in today's issue of *Circulation: Journal of the American Heart Association*.

"There are only two ways to prove the connection between infections and coronary artery disease: vaccinations and antibiotic therapy," said lead author Juha Sinisalo of Helsinki University Central Hospital in Finland.

"Vaccinations to prevent heart

disease are not available. Therefore, we conducted this study to find out if suppressing infections would decrease the rate of new heart attacks."

The study offers new insight into the cause of atherosclerosis — hardening of the arteries.

When tiny lesions form inside arteries, they attract platelets and other "healing" cells, causing a tough, brittle substance called plaque to form. The plaque impedes blood flow and eventually leads to heart disease.

Conventional medical wisdom holds that cholesterol causes the initial injury. Pharmaceutical companies have made billions of dollars in recent years making drugs such as Lipitor that cut cholesterol levels.

But a growing body of evidence suggests inflammation may play a greater role.

"The biggest question we've had is why do people who go along with stable coronary artery disease and have no real symptoms suddenly develop unstable angina?" said Lyall Higginson, chief of cardiology at the University of Ottawa Heart Institute.

"I think it's a really exciting possibility that one of the things that might trigger it is inflammatory disease and the possibility of infection."

The idea goes back to 1972, when Canadian pathologist Sean Moore suggested germs, viruses and other molecules could cause injuries to artery walls, causing atherosclerosis. In 1985, Finnish researchers found 68% of patients who suffered heart attacks had been exposed to Chlamydia

pneumoniae, compared with only 17% of healthy patients.

Since then, scientists have linked porphyromonas gingivitis, which causes gum disease, and cytomegalovirus, a common herpes virus, to heart disease.

However, studies to test antibiotics in heart disease have shown mixed results. In a British study of 213 male patients, a three-day course of the antibiotic azithromycin cut the risk of a subsequent heart attack. But a more recent study in patients with stable heart disease found little difference after six months between those who took antibiotics and those taking a placebo.

In the current study, Dr. Sinisalo's team looked at 148 patients who either had a serious heart attack or severe chest pain. For 85 days, participants received a daily placebo or an identical-looking, 500-milligram tablet of clarithromycin, mostly used for treating children with sinus or lung infections.

After 555 days, 16 of the clarithromycin patients and 27 of the placebo patients had died, a significant difference.

"The action of clarithromycin seems to be long-lasting," Dr. Sinisalo said.

Although the study's results are interesting, Dr. Higginson said the number of patients involved is too small to draw firm conclusions.

"We've had variations of opinion in the past and I think this certainly doesn't make it a done deal," he said.

"On the other hand, it's encouraging."

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