

## DGDispatch

### **Nicotine Patches Safe in Patients With Coronary Artery Disease and Stress-Induced Myocardial Ischaemia: Presented at ACC**

NEW ORLEANS, LA -- March 28, 2007 -- Nicotine patches do not increase stress-induced myocardial ischaemia and appear to be a safe way to aid smoking cessation in patients with coronary artery disease (CAD) and active ischaemia, according to a study presented here at the 56<sup>th</sup> annual scientific session of the American College of Cardiology (ACC).

The study, presented on March 26<sup>th</sup>, aimed to investigate the safety of nicotine patch use in patients with CAD who have myocardial ischaemia quantitated during stress testing. Lead investigator Monika Leja, MD, researcher, Methodist DeBakey Heart Centre, Houston, Texas, said the study was the first prospective multicentre randomized placebo-controlled trial of its kind.

Researchers assessed the effects on stress-induced myocardial ischaemia using single photon emission computed tomography (SPECT) in 55 patients with a mean age of 59 years ( $\pm 7$  years) all of whom had greater than 9% ischaemic perfusion defect size (PDS) and who smoked more than 20 cigarettes daily.

Patients were randomised to use 21 mg nicotine patches or placebo patches while continuing to smoke. Exclusion criteria were unstable angina, recent coronary angioplasty or bypass surgery, significant valvular heart disease or intolerance to nicotine preparations.

A SPECT scan was repeated after 1 week and patients were then encouraged to stop smoking and continue to use the patches. Patients underwent a third scan at week 4. Nicotine and exhaled carbon monoxide (CO) levels were measured prior to each SPECT scan and researchers compared the results of active patch-using patients to those given a placebo.

Of the 28 patients on nicotine patch, 23 (82.1%) completed treatment through week 4, while 16 of 27 (59.3%) on the placebo patch completed treatment through week 4.

After 4 weeks, nicotine patch users showed a greater rate of CO reduction compared with baseline (22.3 vs. 11.5.0 parts per million) versus those administered placebo (23 vs. 18.6 ppm;  $P = .02$  at week 1 and  $P = .05$  at week 4) which paralleled decreased cigarette usage.

Nicotine patch users saw a drop of cigarettes smoked daily from 25.9 to 7.2, while placebo patch users decreased usage from 31.9 to 11.4 cigarettes daily ( $P = .37$  at week 1 and  $.70$  at week 4).

No significant changes in total or ischaemic PDS changes were observed from baseline in the nicotine patch group, compared with patients in the placebo group (15.1 vs. 13.3 %, compared with 12.1 vs. 10.6 %;  $P = .78$  at week 1;  $P = .55$  at week 4).

"This result was achieved despite more than a 2 fold higher plasma level of nicotine in the active than the placebo group," Dr. Leja noted.

She added that an adequately powered cardiac event trial of nicotine versus placebo patches would be required to confirm the study observations.

*[Presentation title: Nicotine Patches Are Safe to Use in Patients With Coronary Artery Disease and Stress-Induced Myocardial Ischaemia. Abstract 1014-173]*