

Ultrasonographic evaluation of carotid intima-media thickness in hypertensive and normotensive individuals.

This was a case control study designed to evaluate carotid intima-medial thickness (IMT) by high-resolution ultrasound in hypertensive and normotensive individuals.

High-resolution carotid ultrasound was done in 203 hypertensive patients (cases) and 101 normotensive individuals (control). Scanning of bilateral common carotid artery (CCA) was performed in anteroposterior projections. To obtain a better image sound wave was adjusted perpendicularly to the arterial surface of the posterior wall of the vessel, yielding two parallel echogenic lines which correspond to lumen-intima and media-adventitia interfaces. Intima-medial thickness was measured in the far wall 1-1.5 cm proximal to the bulb bilaterally. The age of the study population ranged from 35 to 65 years.

Mean IMT was significantly high in hypertensive patients compared to the control group, $p < 0.001$ (in cases, IMT in right side was 0.968 mm and that of left side was 0.969 mm and in control group IMT of right side was 0.551 mm and that of left side was 0.555 mm). A significant difference in IMT of bilateral common carotid arteries was found between the smoker and non-smoker hypertensive patients ($p < 0.02$). IMT was found to increase progressively with age.

In conclusion, the study revealed a strong correlation between IMT of common carotid artery and hypertension. Hence, IMT measurement of CCA by high-resolution ultrasound in hypertensive patients is a helpful tool to assess the atherosclerosis and to identify individual at risk of cardiovascular and cerebrovascular complications.

Sharma P, Lohani B, Chataut SP. Nepal Med Coll J. 2009 Jun;11(2):133-5.

Efficacy and Safety of Varenicline for Smoking Cessation in Patients With Cardiovascular Disease.

The goal of the trial was to evaluate smoking cessation treatment with varenicline (Chantix), a partial $\alpha 4\beta 2$ nicotinic acetylcholine receptor agonist, compared with placebo among patients with stable coronary disease.

In addition to smoking-cessation counseling, patients with stable coronary disease were randomized to varenicline 1 mg twice daily ($n = 355$) versus placebo ($n = 359$) for 12 weeks.

Overall, 714 patients were randomized. There was no difference in baseline characteristics between the groups. In the varenicline group, the mean age was 57 years, 25% were women, body mass index was 27.5 kg/m^2 , mean duration of smoking was 40 years, mean number of cigarettes per day was 22.1, and the proportion of patients with previous serious attempts to quit smoking was 85.6%. Prior myocardial

infarction was present in 45.9%, prior coronary revascularization in 46.2%, prior stroke in 4.5%, and peripheral arterial disease in 23.1%.

The continuous abstinence rate at 9-12 weeks was 47.0% for varenicline versus 13.9% for placebo ($p < 0.0001$). Abstinence diminished over time, although it was still better with varenicline. At 9-24 weeks, abstinence was 28.2% versus 9.5% ($p < 0.001$) and at 9-52 weeks, abstinence was 19.2% versus 7.2% ($p < 0.001$), respectively, for varenicline versus placebo.

All-cause mortality was 0.6% versus 1.4%, cardiovascular mortality was 0.3% versus 0.6%, and any cardiovascular event was 7.1% versus 5.7% ($p = \text{NS}$ for all comparisons), respectively, for varenicline versus placebo. Study medication was stopped for an adverse event in 9.6% of the varenicline group versus 4.3% of the placebo group ($p < 0.05$). The most frequently reported adverse events were nausea (29.5% vs. 8.6%), vomiting (8.2% vs. 1.1%), insomnia (11.9% vs. 6.6%), abnormal dreams (7.9% vs. 1.7%), and constipation (6.5% vs. 2.0%), respectively, for varenicline versus placebo.

Among patients with stable coronary artery disease, the use of varenicline was effective at improving rates of smoking cessation compared with placebo. This was most evident from 9-12 weeks; however, it was also seen at 24-52 weeks. Cardiovascular outcomes were similar between the groups, although varenicline was associated with more gastrointestinal and sleep disturbances.

Varenicline has predominately been studied in otherwise healthy participants; therefore, the safety profile of this agent in individuals with documented coronary artery disease was unknown. Although not definitive, this trial documents that varenicline may be safe for use among individuals with stable coronary artery disease.

Rigotti NA et al. Circulation 2010;121:221-9.