Patients had no history of myocardial infarction and no coronary artery stenosis > 50% on catheterization within the year before enrollment. Patients were excluded if they received a statin within 6 months, had a prior adverse event related to statin use, or had diabetes mellitus. The participants were randomly assigned to receive 20 mg of atorvastatin or placebo to evaluate the primary end point of change in LVEF. After an but did not change in the placebo group. Ramipril improved the Walking Impairment Questionnaire median distance score from 5% (range, 1% to 39%) to 21% (range, 12% to 58%; P < 0.001), speed score from 3% (range 2% to 39%) to 18% (range, 8% to 50%; P < 0.001), and stair-climbing score from 17% (range, 4% to 80%) to 67% (range, 38% to 88%; P < 0.001). No adverse events were reported.

LIMITATIONS: The sample size is modest, and the strict inclusion criteria limit applicability to nonobese patients with claudication and infragenital disease with restricted mobility and limited exercise tolerance. The study population represents approximately 50% of patients with PAD.

CONCLUSIONS: Ramipril improved pain-free and maximum walking time in some adults with symptomatic PAD. IMPACT ON INTERNAL MEDICINE: In addition to reducing cardiovascular morbidity and mortality in patients with PAD, ramipril may improve symptoms in patients with PAD.

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Endarterectomy versus stenting in patients with symptomatic severe carotid stenosis


AIM: Carotid artery stenting (CAS) is less invasive than carotid endarterectomy (CEA), but it is unclear whether it is as safe in patients with symptomatic carotid-artery stenosis. METHODS: We conducted a multicenter, randomized, noninferiority trial to compare stenting with endarterectomy in patients with symptomatic carotid stenosis of at least 60%. The primary end point was the incidence of any stroke or death within 30 days after treatment. RESULTS: The trial was stopped prematurely after the inclusion of 527 patients for reasons of both safety and futility. The 30-day incidence of any stroke or death was 3.9% after CEA (95% CI, 2.0 to 7.2) and 9.6% after CAS (95% CI, 6.4 to 140); the relative risk for any stroke or death after CAS compared with CEA was 2.5 (95%CI, 1.2 to 5.1). The 30-day incidence of disabling stroke or death was 1.5% after CEA (95% CI, 0.5 to 4.2) and 3.4% after CAS (95% CI, 1.7 to 6.7); the relative risk was 2.2 (95% CI, 0.7 to 7.2). At 6 months, the incidence of any stroke or death was 6.1% after CEA and 11.7% after CAS (P = 0.02). There were more major local complications after CAS and more systemic complications (mainly pulmonary) after CEA, but the differences were not significant. Cranial-nerve injury was more common after CEA than after CAS. LIMITATIONS: It is possible that there was a significant “learning curve” with regard to the CAS procedure, accounting for increased complications in this group. Information regarding the specific cause of periprocedural strokes or other potential factors related to strokes in patients treated with CAS was not provided. CONCLUSIONS: In this study of patients with symptomatic carotid stenosis of 60% or more, the rates of death and stroke at 1 and 6 months were lower with CEA than with CAS. IMPACT ON INTERNAL MEDICINE: The benefits of any intervention must be weighed against the potential complication of the procedure. While CAS appears attractive as a less invasive procedure, the current study questions the efficacy of this procedure compared to the well-studied standard of CEA. Currently, CAS is FDA-approved for symptomatic patients with stenosis of the internal carotid exceeding 60% who are at high risk after surgery. This recommendation is based on the SAPPHIRE trial that demonstrated that CAS was safer than CEA with lower risk for perioperative myocardial infarction. There was no difference in stroke or death at 1 year for the two procedures (2.1% 30-day incidence of any stroke or death). Why conflicting results? The SAPPHIRE trial included a large proportion of patients who had asymptomatic internal carotid lesions and were at high surgical risk because of severe CAD, whereas the present study only enrolled symptomatic patients. Both a meta-analysis and a recently published CAS vs. CEA trial (SPACE) have demonstrated similar rates of 30-day incidence of any stroke or death at 5.5% and 6.84%, respectively. So while the present study raises concern for the safety of CAS, it underscores the need for standardize training and credentialing requirements as well as limiting the procedure to those patients with symptomatic internal carotid stenosis > 60% with a high risk for surgical morbidity and mortality.

RELATED ARTICLE

Retrospective multicenter cohort of 1998 patients undergoing CEA. Perioperative complications were recorded. Logistic regression and ROC analyses assessed the predictive abilities of the Goldman, Detsky, American Society Anesthesiologists, and Revised Cardiac Risk indices and of 2 CEA-specific risk models (the Halm and Tu scores). All 6 were equal in predicting noncardiac medical complications. However, only the Revised Cardis Risk Index and the CEA-specific scores predicted death or stroke.

Survival of patients with stage I lung cancer detected on CT screening


BACKGROUND: The outcome for patients with clinical stage I lung cancer that is detected on annual screening using spiral CT is unknown. AIM: To report the results of all patients in the study with stage I lung cancer detected with the use of spiral CT screening, including those who had surgical resection. METHODS: This screening study followed the protocol of the International Early Lung Cancer Action Project (IELCAP). Although the technique for baseline and annual screening with low-dose spiral CT was standardized, each institution specified their enrollment criteria. Additionally, the protocol below was a recommendation; the ultimate diagnostic decision making was left to patient and provider. The interventions following diagnosis of cancer was also left to the discretion of the patient and provider. At baseline a positive result on CT scan was defined as at least one solid noncalcified lung nodule ≥ 5 mm in diameter, at least one nonsolid noncalcified lung nodule ≥ 8 mm in diameter, or a solid endobronchial nodule. For nodules 5 to 14 mm, repeating the CT in 3 months was preferred. For larger nodules, a

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biopsy was obtained, preferably fine-needle aspiration. If no growth, the work-up was terminated. An immediate positron emission tomography (PET) scan could also be obtained. If positive, biopsy was immediately done on the nodule; if negative, CT was obtained at 3 months. If the nodule was ≥ 15 mm, in addition to the options above, immediate biopsy may have been done. If infection was suspected, in addition to all of the above, a 2-week course of antibiotics could be given, followed by CT scan at 1 month. If there was growth or no resolution, a biopsy was performed; otherwise the work-up was stopped. For those whose work-up stopped or with negative CT scans, annual follow-up scans were done 12 months after the baseline. At annual screenings, any new noncalcified nodule, regardless of size, was considered positive. If all nodules were ≤ 3 mm in diameter or if the largest was greater than 3 mm but less than 5 mm. CT was repeated at 6 or 3 months respectively. For nodules ≥ 5 mm, the patient received 2 weeks of broad-spectrum antibiotics, with follow-up CT at 1 month. If the CT scan showed growth or no resolution, a biopsy was performed; otherwise, the work-up was halted. PET scanning could be substituted for biopsy. If positive, the patient had a biopsy. If negative or indeterminate, CT was repeated at 3 months. Growth on CT prompted a biopsy; otherwise work-up was stopped. For those whose work-up stopped or who had negative CT scans, annual follow-up scans were done 12 months after the previous CT. Baseline screening CT scans were completed in 31,567 asymptomatic men and women, between 1993 and 2005. All participants were considered acceptable candidates for thoracic surgery and were at risk for lung cancer because of a history of cigarette smoking, occupational exposure, or second-hand smoke exposure. RESULTS: The median age was 61 years (range, 40-86) and the median pack-years was 30 (range, 1 to 141) at baseline. Of the 4186 (13%) patients with a positive scan necessitating further work-up, 405 (1.3%) cases of lung cancer were identified. Five additional cases of lung cancer were identified. Five additional cases of lung cancer were identified in the interim before the first annual screening CT scan. The median age was 62 years (range, 41 to 86) and the median pack-years was 35 (range, 0 to 141) for the 27,456 patients who had annual screenings. Of the 1460 (5%) patients with a positive scan necessitating further work-up, 74 (0.3%) cases of lung cancer were diagnosed. No interim cases of lung cancer were diagnosed. Biopsies directed by the protocol occurred in 535 patients, of which 479 (89.5%) were lung cancer and 13 (2.4%) were lymphoma or metastatic disease from cancer other than lung cancer. The median tumor size was 13 mm at baseline and 9 mm on annual CT. The patients with a diagnosis of lung cancer had a median follow-up of 40 months.

<table>
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<th>N</th>
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<td>Clinical stage I lung cancer with resection in &lt; 1 month</td>
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Effect of perioperative beta-blockade in patients with diabetes undergoing major non-cardiac surgery: randomized placebo controlled, blinded multicentre trial


AIM: To evaluate the long-term effects of perioperative blockade on mortality and cardiac morbidity in patients with diabetes undergoing major non-cardiac surgery. METHODS: Randomized placebo-controlled, blinded multicenter trial conducted in university anesthesia and surgical centers and one coordinating center. 921 patients aged > 19 scheduled for major noncardiac surgery were randomly assigned to 100 mg metoprolol controlled and extended release or placebo administered from the day before surgery to a maximum of eight perioperative days. The composite primary outcome measure was time to all-cause mortality, acute myocardial infarction, unstable angina, or congestive heart failure. Secondary outcome measures were time to all-cause mortality, cardiac mortality, and nonfatal cardiac morbidity. Analyses were by ITT. RESULTS: Mean duration of intervention was 4.6 days in the metoprolol group and 4.9 days in the placebo group. Metoprolol significantly reduced the mean heart rate by 11% (95% CI, 9% to 13%) and mean blood pressure by 3% (1% to 5%). The primary outcome occurred in 99 of 462 patients in the metoprolol group (21%) and 93 of 459 patients in the placebo group (22%) (hazard ratio 1.03, 0.74 to 1.41) during a median follow-up of 18 months (range 6-30). All-cause mortality was 16% (74/462) in the metoprolol group and 16% (72/459) in the placebo group (1.03, 0.74 to 1.42). The difference in risk for the proportion of patients with serious adverse events was 2.4% (-0.8% to 5.6%). CONCLUSIONS: Perioperative metoprolol did not significantly affect mortality and cardiac morbidity in these patients with diabetes. Confidence intervals, however, were wide, and the issue needs reassessment. LIMITATIONS: While this is the largest placebo-controlled, randomized trial assessing the effect of beta-blockade on perioperative cardiac events, the intervention was once again started immediately before induction. Although parameters were provided to guide withholding treatment, no specific sympatholytic targets were provided. Fewer events comprising the primary outcome occurred than anticipated limiting the study’s ability to detect a mild to moderate benefit of the study drug. Reprinted with permission.