

Discharge on the First Postoperative Day after Elective Carotid Endarterectomy

Pierre Van den Brande,¹ Isolde Van Heymbeeck,¹ Erik Debing,¹ Dimitri Aerden,¹ Karl von Kemp,¹ Leslie Moerman,¹ Chris Verborgh,² and Patrick Haentjens,³ Brussels, Belgium

Background: Medical complications may prolong the hospital stay after elective carotid endarterectomy (CEA). We prospectively assessed the social and medical feasibility and safety of patient discharge on the first postoperative day after elective CEA and unplanned readmissions.

Methods: Between June 2011 and January 2012, 57 consecutive patients scheduled for elective CEA were enrolled with the aim of discharge on the first postoperative day if there were no medical contraindications and on the condition that the patient should not be left alone during the first day and night at home. CEA was carried out under local or general anesthesia. After discharge, the patients were contacted to ascertain the occurrence of arterial hypertension, cerebral hyperperfusion, focal cerebral ischemia, or hospital readmission.

Results: Sixty-two CEA were carried out in 57 patients (33 men and 24 women ranging in age from 51–89 years). The indications for CEA were: asymptomatic high grade stenosis in 27, hemispheric transient ischemic attack in 12, amaurosis fugax in 6, recovered stroke in 16, and nonlateralizing signs in 1. There were no cases of perioperative stroke or death. Discharge on the first postoperative day was achieved in 45 cases (73%). In 15 cases (24%), discharge was on the second postoperative day because of the absence of a relative (12 cases) or for medical reasons (3 cases). Discharge was on day 3 in 1 case, and on day 10 in another, both for medical reasons. No cases of severe arterial hypertension, stroke, mortality, or readmission for reasons related to the CEA procedure were recorded up to postoperative day 30.

Conclusion: In this study, the majority of patients undergoing elective CEA were discharged safely on the first postoperative day. Social reasons, rather than medical reasons, underlied most cases of later discharge. There were no unplanned readmissions for complications of CEA.

INTRODUCTION

Consistent with The North American Symptomatic Carotid Endarterectomy Trial,¹ the Asymptomatic Carotid Artery Study,² and the European Carotid

Surgery Trial,³ carotid endarterectomy (CEA) has been proposed as a treatment option for carotid atherosclerotic disease in proportion to the degree of stenosis because of its beneficial role in the prevention of stroke. The replacement of selective catheter angiography for diagnostic assessment by noninvasive imaging approaches, such as magnetic resonance angiography, computed tomography angiography, and Doppler ultrasonography have resulted in a significant reduction of preoperative neurologic complication rates.^{4–6} The initiation of the best pharmacotherapy, including antiplatelet drugs and statins, and adequate blood pressure control immediately after the diagnosis of carotid atherosclerotic disease diminishes the risk of stroke in symptomatic patients waiting for surgery, during surgery, and after surgery.^{7–9} The beneficial role of CEA is currently supported by level 1 evidence in selected asymptomatic

¹Department of Vascular Surgery, Universitair Ziekenhuis Brussel, Brussels, Belgium.

²Department of Anesthesiology, Universitair Ziekenhuis Brussel, Brussels, Belgium.

³Center for Outcome Research, Universitair Ziekenhuis Brussel, Brussels, Belgium.

Correspondence to: Pierre Van den Brande, MD, PhD, Universitair Ziekenhuis Brussel, Department of Vascular Surgery, Laarbeeklaan 101, B-1090 Brussels, Belgium; E-mail: pierre.vandenbrande@skynet.be

Ann Vasc Surg 2014; 28: 901–907

<http://dx.doi.org/10.1016/j.avsg.2013.10.014>

© 2014 Elsevier Inc. All rights reserved.

Manuscript received: July 8, 2013; manuscript accepted: October 6, 2013.

and symptomatic patients with a low perioperative risk.¹⁰ Advances in surgery and anesthesiology have resulted in fewer postoperative intensive care unit admissions¹¹ and in patient discharge as early as the evening of the day of surgery.^{12,13} However, when postoperative hospital length of stay is shortened, safety concerns require the timely preoperative identification of patients at risk, early recognition of postoperative complications, and a cautionary discharge policy to prevent readmissions for complications that could have been anticipated. Factors associated with a prolonged length of postoperative stay include age, insulin-dependent diabetes, female sex, chronic renal insufficiency, the need for intravenous vasodilators, undue delay of discharge, and postoperative complications, such as myocardial infarction, central neurologic deficits, and neck hematoma.¹³ Neurologic deficits and neck hematomas after CEA occur within 8 hours postoperatively in 95% of patients. After 24 hours, additional complications are infrequent and unpredictable.¹³ Discharge on the first postoperative day has been considered feasible in many patients undergoing CEA as long as the medical risk factors necessitating a prolonged postoperative length of stay have been identified.^{14,15} In our view, early discharge and returning home may also require the social and actual support of family or friends. In view of this, we conducted a prospective study to investigate the feasibility and safety of discharge on the first postoperative day after elective CEA and sought to identify the reasons for a prolonged length of stay and for readmission within 30 days.

METHODS

Between June 2011 and January 2012, consecutive patients scheduled to undergo elective CEA were enrolled in this prospective study. The study protocol excluded patients undergoing CEA within 24 hours after hospital admission for ischemic neurologic deficit because we considered that this would not leave enough time to consult adequately with the family about the aim and the postoperative conditions of the study, patients having CEA together with heart surgery because this would prevent hospital discharge on the first postoperative day, and those undergoing carotid artery stenting. Indications for CEA included a degree of stenosis of at least 80% in asymptomatic patients and a degree of at least 50% in symptomatic patients, as determined by computed tomography angiography. Patients were considered symptomatic if they had a history of stroke, transient ischemic attack, or amaurosis fugax related to the carotid stenosis in the 6 months before surgery or when nonlateralizing symptoms existed

that could be attributed to severe bilateral carotid stenosis. We introduced a uniform policy of discharge from the hospital on the first postoperative day after CEA. The patients—and their relatives when present—were informed about this policy and were advised that discharge would occur on the first postoperative day only if there were no medical or surgical contraindications (i.e., medical criteria) and if the patient would not be left alone on the first day and night at home (i.e., social criteria). Patients living alone were advised to stay with family or friends during that period. In case of patients living in a home for the elderly or a center for physical rehabilitation, the management of the home was informed about the study.

The local ethical committee approved the study. All patients enrolled in the study provided written informed consent.

Preoperatively, risk factors for unfavorable outcome were identified and pharmacologic plaque stabilization and antiplatelet therapy were initiated. A thorough medical history, clinical examination, preoperative blood sampling, and analysis of medical records were performed to evaluate cardiovascular risk factors and comorbidities. Patients were considered hypertensive when diastolic pressure was >90 mm Hg or when they were using antihypertensive drugs. Hyperlipidemia was defined as a fasting serum concentration of cholesterol >190 mg/dL, low-density lipoprotein level of >115 mg/dL, triglycerides >180 mg/dL, or when patients were using antihyperlipidemic drugs. Patients were considered diabetic when they were taking oral antidiabetic medications or insulin or when the fasting serum glucose concentration was >125 mg/dL. Smokers were defined as patients who were currently smoking or who were smoking in the year before the study. Cardiac disease was defined present when an electrocardiogram showed signs of recent or remote myocardial infarction, asymptomatic arrhythmia, or when stable or unstable angina, congestive heart failure, or symptomatic arrhythmia existed clinically. Patients were considered to have pulmonary disease in the event of dyspnea on mild exertion or in cases of radiographic parenchymal changes or abnormal pulmonary function testing. Chronic renal insufficiency was defined as a serum creatinine concentration of >1.5 mg/dL or estimated glomerular filtration rate of <60 mL/min/1.73 m².

Perioperatively, all patients were taking statins, low-dose aspirin, and antihypertensive drugs when necessary. On the morning of the day of surgery, all oral medications prescribed, including antihypertensive drugs, were administered. The choice to discontinue clopidogrel was at the discretion of the surgeon.

Download English Version:

<https://daneshyari.com/en/article/2886685>

Download Persian Version:

<https://daneshyari.com/article/2886685>

[Daneshyari.com](https://daneshyari.com)